

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number  
WO 2004/086817 A3

(51) International Patent Classification<sup>7</sup>: H04S 1/00,  
G10L 19/02

MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:  
PCT/IB2004/050288

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 18 March 2004 (18.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03100752.9 24 March 2003 (24.03.2003) EP

(71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];  
Groenewoudseweg 1, NL- 5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DEN BRINKER, Albertus, C. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). GERRITS, Andreas, J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). SLUIJTER, Robert, J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: GROENENDAAL, Antonius, W., M.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Declaration under Rule 4.17:

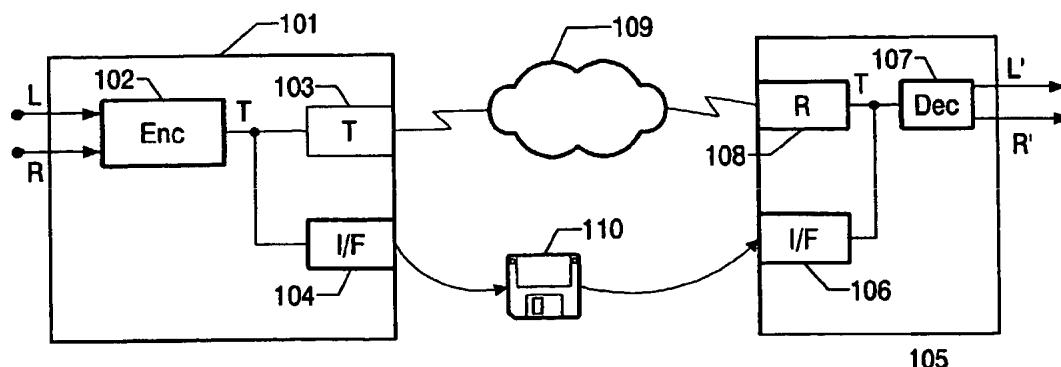
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

[Continued on next page]

(54) Title: CODING OF MAIN AND SIDE SIGNAL REPRESENTING A MULTICHANNEL SIGNAL



WO 2004/086817 A3

(57) Abstract: The multichannel signal is represented by the main signal and a set transformation parameters which represent the side signal. It enables reducing the bit rate of the transmitted signal without degrading the quality of the multichannel signal.



- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(88) Date of publication of the international search report:  
10 February 2005

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/050288

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04S1/00 G10L19/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04S H04R G10L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 107 232 A (LUCENT TECHNOLOGIES INC) 13 June 2001 (2001-06-13) cited in the application the whole document	1,2,5-7, 13-17
Y	FR 2 821 475 A (FRANCE TELECOM) 30 August 2002 (2002-08-30) page 1, line 1 - line 2 page 2, line 23 - line 27 page 6, line 20 - page 9, line 13 figures 1,5	3 3

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

23 November 2004

21/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Fachado Romano, A

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/050288

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 03/085645 A (IRWAN ROY ; AARTS RONALDUS M (NL); KONINKL PHILIPS ELECTRONICS NV (NL)) 16 October 2003 (2003-10-16) page 1, line 1 - line 12 page 1, line 25 - page 2, line 14 page 8, line 5 - page 9, line 21 figures 1,3 -----	1,7, 13-17
P, X	WO 2004/008805 A (BREEBAART DIRK J ; KONINKL PHILIPS ELECTRONICS NV (NL)) 22 January 2004 (2004-01-22) page 1, line 1 - line 3 page 2, line 9 - line 12 page 2, line 22 - line 24 page 6, line 23 - line 27 page 8, line 12 - line 20 page 11, line 5 - line 18 page 14, line 14 - line 20 figures 1,2,6,10 -----	1,7, 13-17
A	SCHUIJERS E ET AL: "ADVANCES IN PARAMETRIC CODING FOR HIGH-QUALITY AUDIO" PREPRINTS OF PAPERS PRESENTED AT THE AES CONVENTION, XX, XX, 22 March 2003 (2003-03-22), pages 1-11, XP008021606 abstract paragraph '03.3! figures 8,9,11,12 -----	1,2,7, 13-17
A	WO 03/007656 A (CODING TECHNOLOGIES SWEDEN AB ; KJOERLING KRISTOFER (SE); HENN FREDRIK) 23 January 2003 (2003-01-23) page 4, line 25 - page 5, line 20 figure 1 -----	1,7, 13-17

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/050288

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
EP 1107232	A 13-06-2001	US 6539357 B1	CA 2326495 A1	EP 1107232 A2	25-03-2003 03-06-2001 13-06-2001
		JP 2001209399 A			03-08-2001
FR 2821475	A 30-08-2002	FR 2821475 A1	EP 1362344 A1	WO 02069326 A1	30-08-2002 19-11-2003 06-09-2002
WO 03085645	A 16-10-2003	WO 03085645 A1			16-10-2003
WO 2004008805	A 22-01-2004	BR 0305434 A	WO 2004008805 A1		28-09-2004 22-01-2004
WO 03007656	A 23-01-2003	EP 1410687 A1	WO 03007656 A1		21-04-2004 23-01-2003